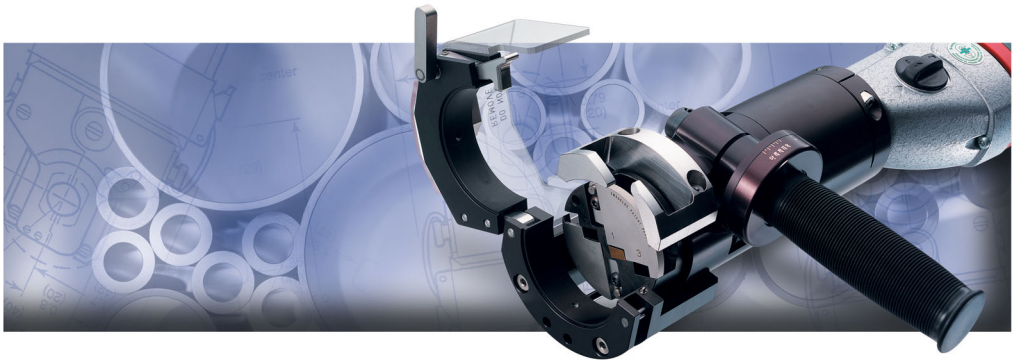
TUBE FACING TOOL



USER'S MANUAL

Swagelok®

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About The Tube Facing Tool

Installing or Relocating The Cutting Insert

Your facing tool has been shipped with a cutting insert in position number 1. If you will be facing tubing larger than 3/4 in. (18 mm) O.D. you will need to relocate the cutting insert to a different pocket. Cutting insert life is dependent upon tube material, tube diameter, depth of cut, and operational technique.

Collet Change and Installation

The tube facing tool cuts a wide range of diameters through the use of tube collets. Two collet halves per size are required and must be ordered separately. *(See Chart B on page 14)*

Motor Settings

The facing tool is driven by a heavy-duty industrial motor. There are three control knobs that must be set properly to maximize the performance of the facing tool.

Facing The Tube

As you prepare to face your tubing there are some factors to consider. The method used to cut the tubing may affect the amount of material needed to be removed. The facing tool has been designed to allow for a random amount of material removal if finished length is not critical. You can also control the amount of material removed if the finished length is important.

Bench Mount Stand

The bench mount stand does not require any tool to remove or secure the facing tool. The base plate will accommodate permanent bench mounting.

Spare Parts and Accessories

Spare part and accessories can be ordered as needed through your Swagelok sales representative.

SAVE THESE INSTRUCTIONS

SAFETY PRECAUTIONS

The following is a list of general safety guidelines to be considered when operating this tool. Standard safe machining practices should always be observed when operating this tool.

Before operating this tool, read this User's Manual completely.

Inspect tool, cord, and accessories for damage prior to operating.

Safety guards have been installed for your protection. **DO NOT OPERATE TOOL WITHOUT SAFETY GUARDS IN PLACE.**

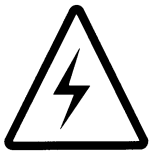
The motor should always be disconnected from the power source whenever servicing the unit or changing cutting inserts, collets, or other components.

Refer to the operating/instruction manual for specific safety and operating instructions for the motor included with this tool.

SAFETY INFORMATION



WARNING!
MOVING PARTS. Keep hands, loose clothing, and long hair away from rotating or moving parts. Unplug equipment prior to adjusting or servicing. Serious injury can occur.



WARNING!
ELECTRICAL SHOCK. Read all enclosed safety instructions and manuals prior to operation.



WARNING!
KEEP DRY. Equipment and components are not waterproof.



WARNING!
FIRE OR EXPLOSION. Do not use equipment in a combustible or explosive atmosphere.

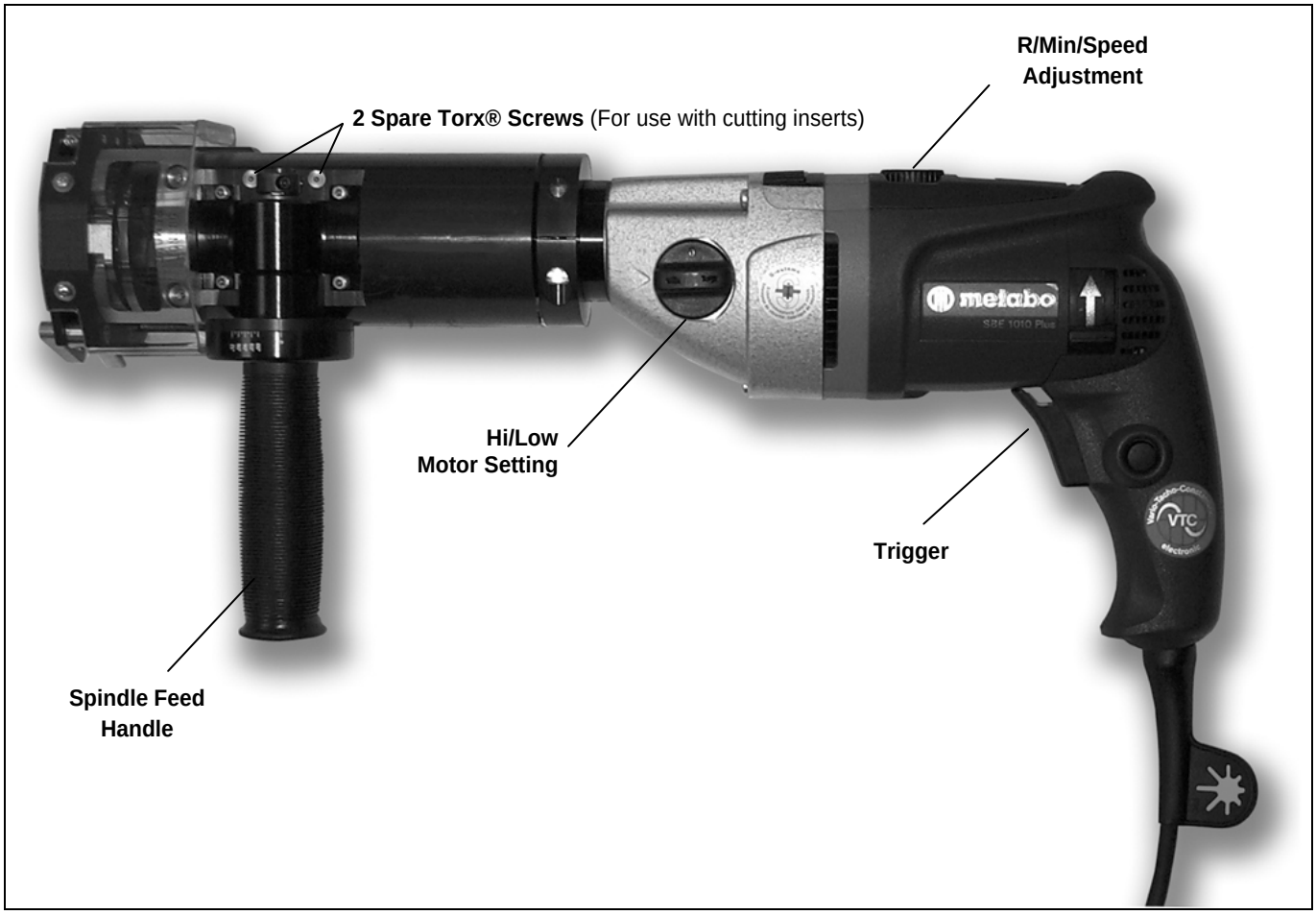


WARNING!
EYE PROTECTION. Eye protection must be worn while operating or working near the equipment.



CAUTION!
EAR PROTECTION. Ear protection may be required if operating or working near the equipment for prolonged periods of time

Identification of Components



The following items are included with your facing tool:

A) Shipping/storage case with foam

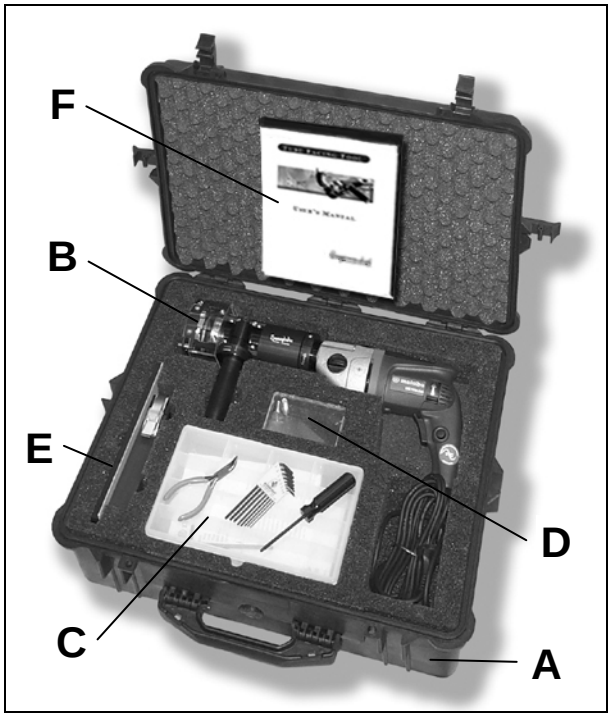
B) Facing tool

C) Large storage case for collets and tools
- hex keys
- Torx® driver
- bent needle-nosed pliers

D) Small storage case for extra cutting inserts and hardware

E) Bench stand (optional)

F) User's Manual



Torx is a registered trademark of Textron, Inc.

Installing or Relocating the Cutting Insert

Make sure motor is unplugged.

To relocate the cutting insert:

1. Open top half of fixture and swing completely out of the way as follows:
   a) Turn lever to 12 o'clock position. *(See Figure-1)*
   b) Firmly press down on top half of fixture. *(See Figure-2)*
   c) Release latch. *(See Figure-3)*
   d) Swing open top half. *(See Figure-4)*

Figure-1

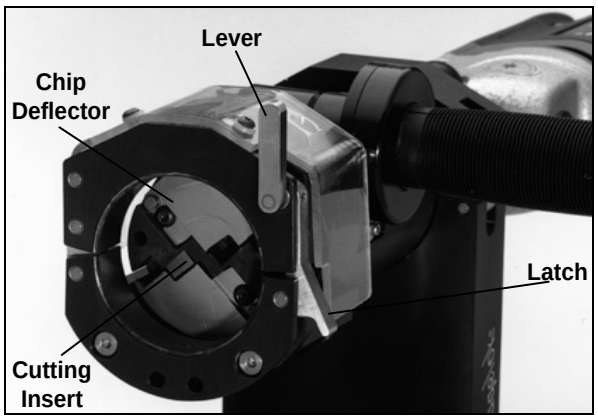


Figure-2

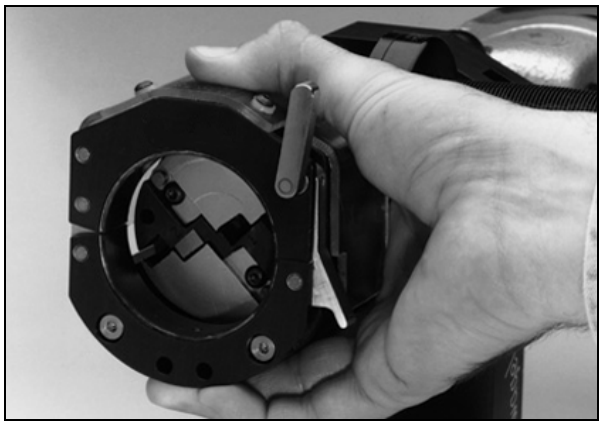


Figure-3

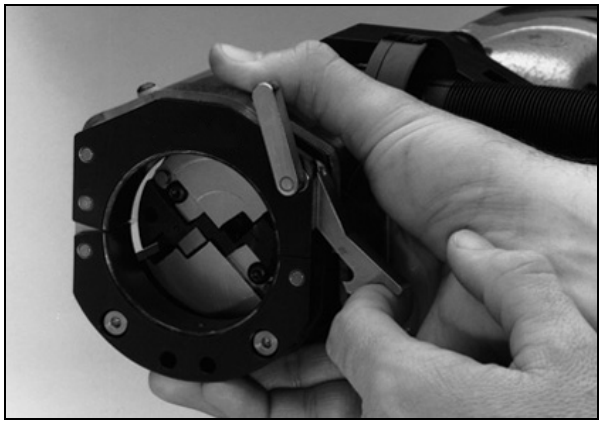


Figure-4



Installing or Relocating the Cutting Insert *(Continued)*

2. Loosen chip deflector Torx® screw. *(See Figure-5)*
3. Rotate chip deflector out of the way. *(See Figure-6)*
4. Loosen cutting insert Torx® screw and remove cutting insert. *(See Figure-7)*
5. Install new cutting insert in appropriate pocket in spindle. Clear pocket of chips and debris before installing cutting insert. *(Refer to Chart A below)*
6. Reposition chip deflector and tighten. *(See Figure-8)*

SWAGELOK

INSERT POSITION CHART

Pocket Number	Range Diameter in	Range Diameter mm	Secondary Insert Pocket Number
1	up to 3/4	up to 20	Not Required
2	7/8 to 1 1/4	20 to 33	Not Required
3*	1 5/16 to 1 3/4	33 to 50	1
4*	1-7/8 to 2	50 to 52	2

CHART A

See **Special Instructions and Figure-10 on page 6.*

Figure-5

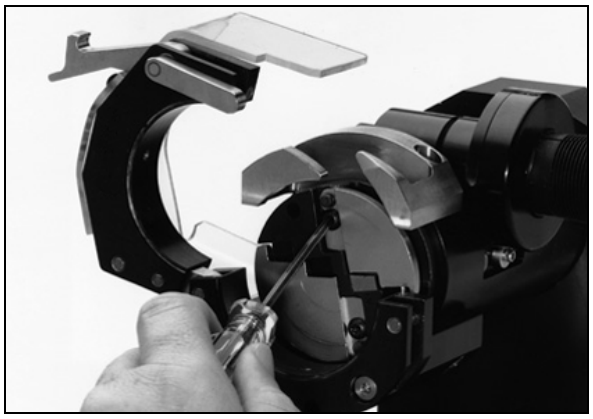


Figure-6

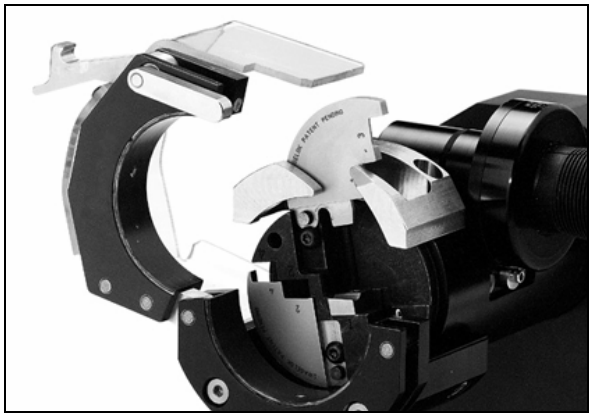


Figure-7

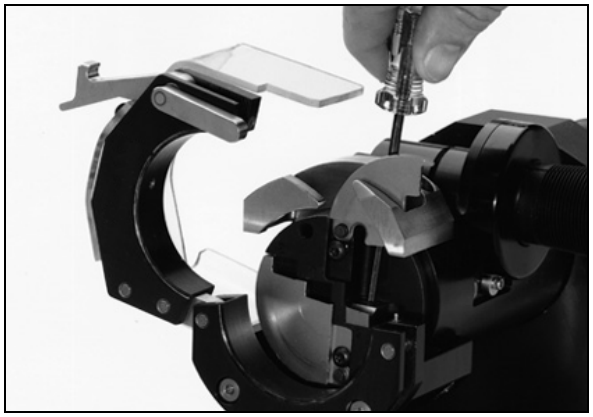
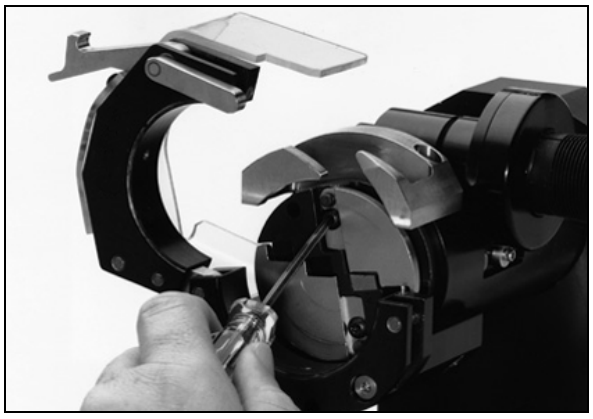


Figure-8

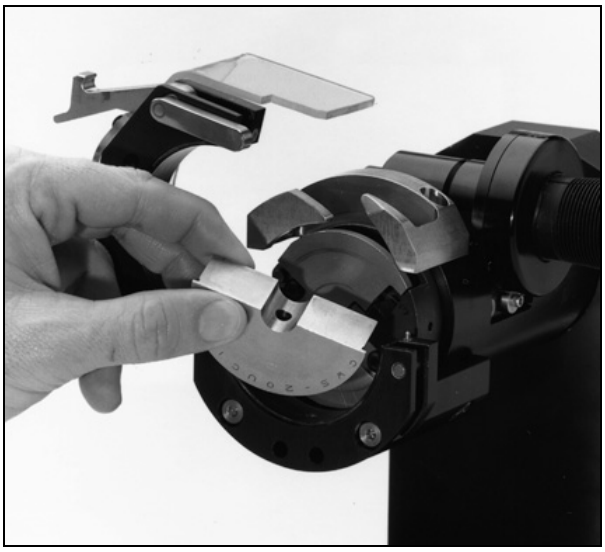


Installing or Relocating the Cutting Insert *(Continued)*

7. You may want to install the collet halves at this point while fixture is open.
   (See Figure-9 and refer to page 7)
8. Close top half of fixture and secure by following Steps 1.a) and 1.b) and secure latch.
   (Refer to page 4)

NOTE: Additonal Torx® screws for the cutting inserts are included in the housing.
(Refer to tool photo on page 3)

Figure-9

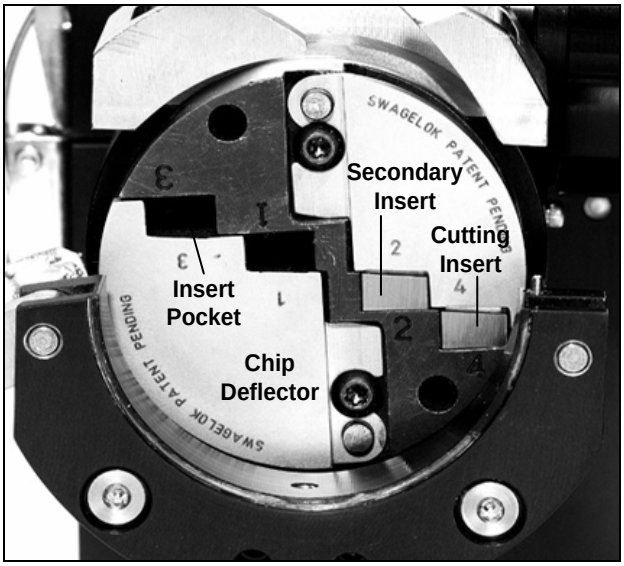


Special Instructions

* When facing tubing with a cutting insert in pocket 3 or 4, it is recommended that a cutting insert be installed in the adjacent pocket. *EXAMPLE: When facing 2 in. O.D. tubing with a cutting insert in Pocket 4, a cutting insert should be installed in Pocket 2.* The secondary cutting insert blocks the opening and helps prevent any chips from entering the I.D. of the tube. The secondary insert can be a used cutting insert.

Do not use the facing tool with cutting inserts installed in all four pockets, or in the following combinations: 1 and 2; 2 and 3; 3 and 4.

Figure-10



Collet Change and Installation

1. Open top half of fixture.
   (See Figures 1 thru 4 on page 4)
2. Install collet halves. *(See Figure-11)*
3. Secure with socket head cap screw.
   (See Figure-12)
4. Close top half of fixture and secure by following Steps 1.a) and 1.b) and securing latch.
   (Refer to page 4)

Figure-11

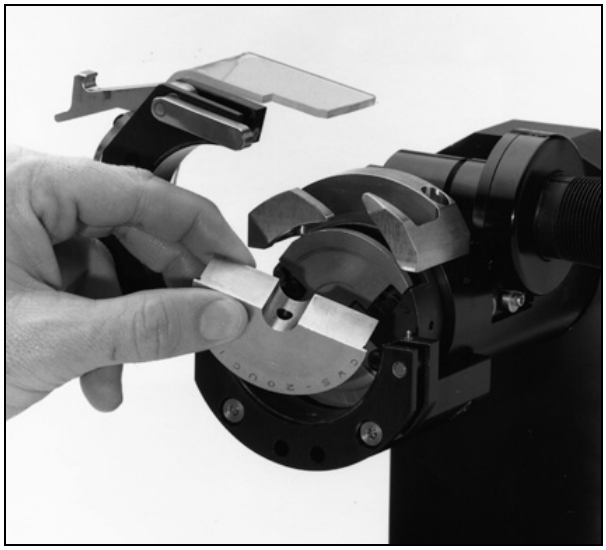
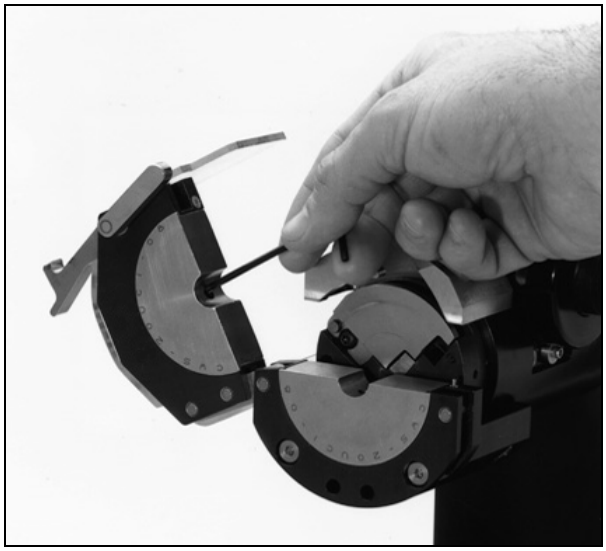


Figure-12



Motor Settings for Non-Guarded Trigger

1. Set Hi/Low motor setting *(See Figure-13)* and R/Min *(See Figure-14)* according to the speed tables found on page 9. Rotate clockwise to go from Turtle to Rabbit (Low to Hi) and counter-clockwise to go from Rabbit to Turtle (Hi to Low). **Do not force the switch into or out of gear.** If you encounter difficulty engaging or disengaging the switch, rotate the spindle simultaneously while turning the switch.
2. Verify Hammer Switch is in drill mode as shown in Figure-15.
3. Verify reverse switch is in forward mode as shown in Figure-16.

NOTE: Operating the Tool with the motor in either mode can cause reduced cutting insert life and could cause damage to the Facing Tool.

Figure-13

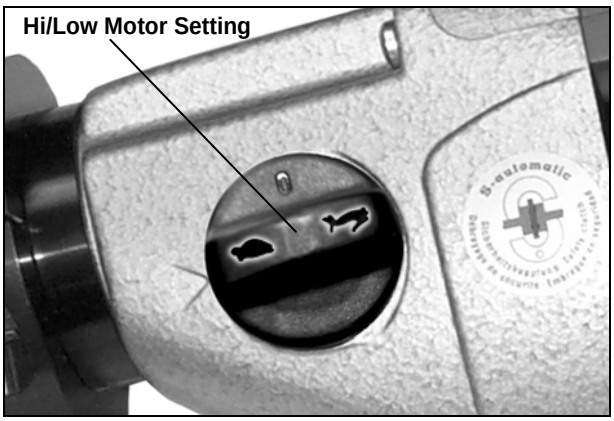


Figure-14

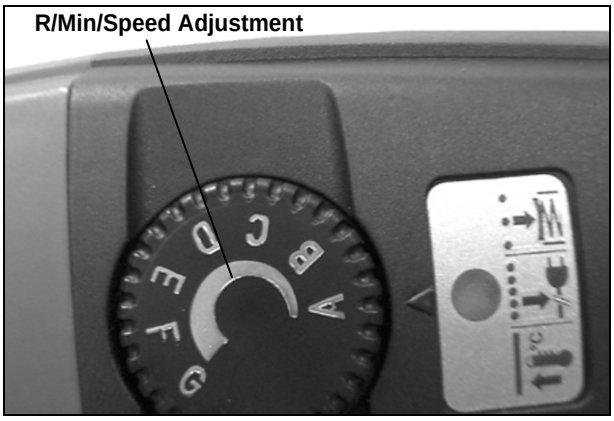


Figure-15

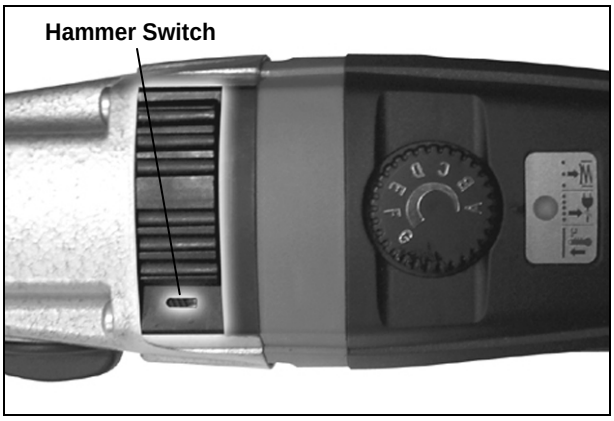


Figure-16



Motor Settings for Guarded Trigger

1. Set torque adjustment to highest setting [+]. *(See Figure-13)*
2. Set Hi/Low motor setting *(See Figure-14)* and R/Min *(See Figure-15)* according to the speed tables found on page 9. Rotate clockwise to go from Turtle to Rabbit (Low to Hi) and counter-clockwise to go from Rabbit to Turtle (Hi to Low). **Do not force the switch into or out of gear.** If you encounter difficulty engaging or disengaging the switch, rotate the spindle simultaneously while turning the switch.

Figure-13

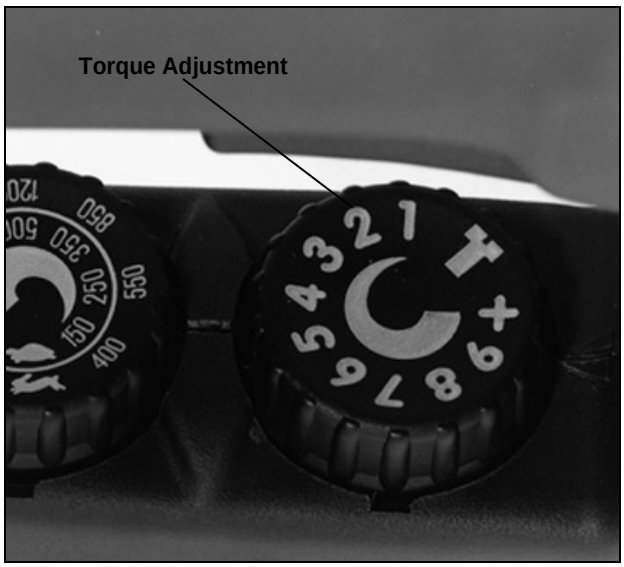
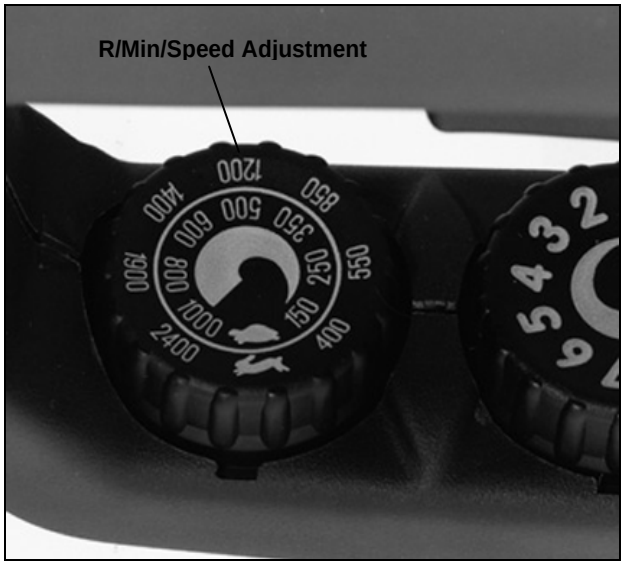


Figure-14



Figure-15

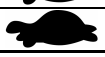


Motor Settings for Guarded Trigger *(Continued)*

Motor Settings and Cutting Techniques

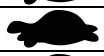
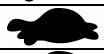
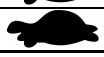
This information is for reference only. Actual settings and cutting techniques may vary from these charts depending on the chemical, physical and mechanical properties of the tubing.

Stainless 316L / 316LV

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>1400	
5/16 to 3/8	8 to 10	800 to 1400	
1/2 to 3/4	12 to 18	450 to 700	
7/8 to 2	20 to 52	350 to 500	

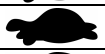
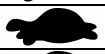
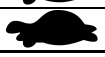
Continuous feed to desired depth. Intermittent feed will help to break chips on deep cut.

Alloy 400

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	800 to 1000	
5/16 to 3/8	8 to 10	600 to 900	
1/2 to 3/4	12 to 18	450 to 700	
7/8 to 2	20 to 52	350 to 500	

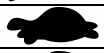
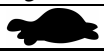
Gradual feed may be required to minimize chip thickness. Take caution not to overheat cut zone. If chips are blue, reduce speed and/or feed.

Low Manganese / Low Sulfur Stainless

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	600 to 1000	
5/16 to 3/8	8 to 10	500 to 800	
1/2 to 3/4	12 to 18	350 to 600	
7/8 to 2	20 to 52	250 to 400	

Use very gradual feed to eliminate deformation of material before the material can sheer.

Carbon Steel

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>1500	
5/16 to 3/8	8 to 10	1000 to 1500	
1/2 to 3/4	12 to 18	600 to 900	
7/8 to 2	20 to 52	450 to 700	

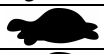
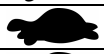
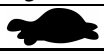
Continuous feed to desired depth. Intermittent feed will help to break chips on deep cut.

Titanium

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>1800	
5/16 to 3/8	8 to 10	1200 to 1500	
1/2 to 3/4	12 to 18	800 to 1400	
7/8 to 2	20 to 52	600 to 1000	

Caution should be taken not to overheat cut zone. If chips are blue, reduce speed and/or feed.

Alloy 600

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	550 to 900	
5/16 to 3/8	8 to 10	450 to 800	
1/2 to 3/4	12 to 18	350 to 700	
7/8 to 2	20 to 52	250 to 600	

Continuous feed, take caution not to overheat cut zone.

*Instructions For Facing 1/8 in. (3 mm) Tubing

1. Insert the tubing approximately 0.05 to 0.06 in. (1.3 to 1.5 mm) past the end of the collet and lock into place.
2. Set motor settings according to appropriate chart above.
3. Fully depress the trigger.
4. Advance the spindle slowly towards the tubing so that when contact is made, the cutting insert lightly touches the tubing.
5. Use short interrupted cuts to face the tubing. This seems to achieve a better result than a continuous uninterrupted cut.
6. Remove all chips after each piece of tubing is faced.
7. A very small OD burr (approximately 0.005 in.) may be present after facing the tubing. This burr will be consumed into the weld bead or it can be removed with a deburring tool.

Motor Settings for Non-Guarded Trigger *(Continued)*

Motor Settings and Cutting Techniques

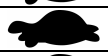
This information is for reference only. Actual settings and cutting techniques may vary from these charts depending on the chemical, physical and mechanical properties of the tubing.

Stainless 316L / 316LV

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>D	
5/16 to 3/8	8 to 10	B to D	
1/2 to 3/4	12 to 18	D to F	
7/8 to 2	20 to 52	C to D	

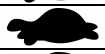
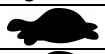
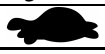
Continuous feed to desired depth. Intermittent feed will help to break chips on deep cut.

Alloy 400

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	E to G	
5/16 to 3/8	8 to 10	E to G	
1/2 to 3/4	12 to 18	D to F	
7/8 to 2	20 to 52	C to D	

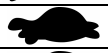
Gradual feed may be required to minimize chip thickness. Take caution not to overheat cut zone. If chips are blue, reduce speed and/or feed.

Low Manganese / Low Sulfur Stainless

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	E to G	
5/16 to 3/8	8 to 10	D to F	
1/2 to 3/4	12 to 18	C to E	
7/8 to 2	20 to 52	B to D	

Use very gradual feed to eliminate deformation of material before the material can sheer.

Carbon Steel

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>D	
5/16 to 3/8	8 to 10	C to D	
1/2 to 3/4	12 to 18	E to G	
7/8 to 2	20 to 52	D to F	

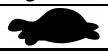
Continuous feed to desired depth. Intermittent feed will help to break chips on deep cut.

Titanium

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	>E	
5/16 to 3/8	8 to 10	C to D	
1/2 to 3/4	12 to 18	B to D	
7/8 to 2	20 to 52	B to C	

Caution should be taken not to overheat cut zone. If chips are blue, reduce speed and/or feed.

Alloy 600

Tube Diameter in	Tube Diameter mm	RPM Setting	Hi/Low Motor Setting
1/8* to 1/4	3 to 6	D to G	
5/16 to 3/8	8 to 10	D to G	
1/2 to 3/4	12 to 18	C to F	
7/8 to 2	20 to 52	B to E	

Continuous feed, take caution not to overheat cut zone.

*Instructions For Facing 1/8 in. (3 mm) Tubing

1. Insert the tubing approximately 0.05 to 0.06 in. (1.3 to 1.5 mm) past the end of the collet and lock into place.
2. Set motor settings according to appropriate chart above.
3. Fully depress the trigger.
4. Advance the spindle slowly towards the tubing so that when contact is made, the cutting insert lightly touches the tubing.
5. Use short interrupted cuts to face the tubing. This seems to achieve a better result than a continuous uninterrupted cut.
6. Remove all chips after each piece of tubing is faced.
7. A very small OD burr (approximately 0.005 in.) may be present after facing the tubing. This burr will be consumed into the weld bead or it can be removed with a deburring tool.

Facing the Tube

Cutting Technique: When facing the tube, there are several techniques that can be employed. The two most common are one long continuous cut, and short interrupted cuts. The type of cut used may be determined by material type, material hardness, tube diameter, etc. The cutting technique used can also affect the quality of the face, as well as tool bit life. *(Refer to page 9)*

Operating Tip: Chips will begin to accumulate in the spindle after facing of tubing. Bent needle-nose pliers have been supplied to aid in the removal of these chips, as needed. NEVER USE YOUR FINGERS TO REMOVE CHIPS! *(See Figure-17)*

Random Material Removal

1. Rotate lever to 12 o'clock position to open the collets. *(See Figure-18)*
2. Slowly insert tubing until it gently contacts the spindle/cutting insert. Withdraw tube slightly so that it does not contact the cutting insert.
   CAUTION: DO NOT START MOTOR IF TUBE IS CONTACTING SPINDLE/CUTTING INSERT.
3. Rotate lever clockwise to secure tubing. Tubing will be held securely provided enough pressure (force) is applied to the lever. *(See Figure-19)*
4. Before operating the facing tool, make sure motor settings are correct and plastic safety guard is in place. *(See Figure-20 on page 11)*



WARNING: A clear plastic safety shield has been attached for your protection. DO NOT REMOVE THE SHIELD. Do not operate tool if shield is damaged or missing. Refer to page 15 for ordering information.

5. Fully depress trigger. *(See Figure-21 on page 11)*
6. When motor achieves full R/Min, begin to slowly advance the spindle with the spindle feed handle until the tool bit makes contact with the tube.
7. Continue to advance the spindle until desired amount of material is removed.
8. Return handle to home position.
9. Release the trigger to stop the motor and spindle rotation.
10. Release tubing by turning the lever to the 12 o'clock position.
11. Remove tubing and insert a new piece of tubing to begin the process over again.

Figure-17

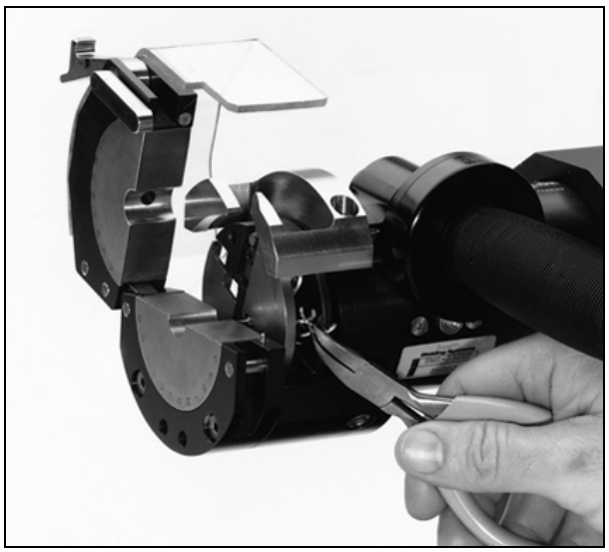


Figure-18

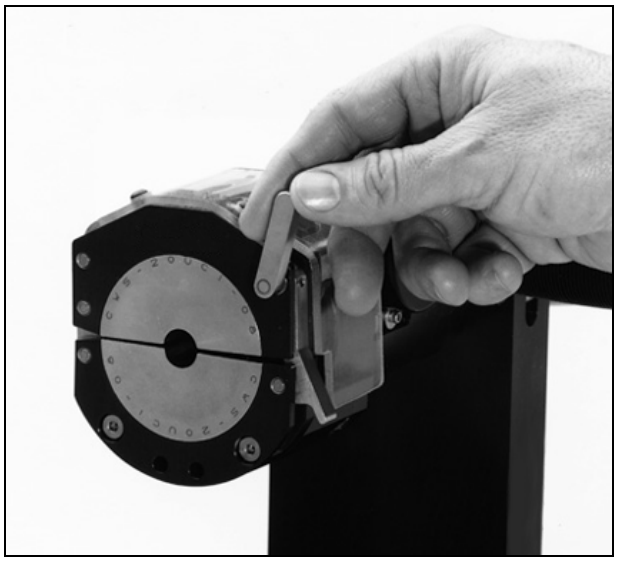


Figure-19



Facing The Tube *(Continued)*

Controlled Material Removal

1. Rotate lever to 12 o'clock position to open the collets. *(See Figure-18 on page 10)*
2. Slowly insert tubing until it gently contacts the spindle/cutting insert.
   CAUTION: DO NOT START MOTOR IF TUBE IS CONTACTING SPINDLE/CUTTING INSERT.
3. With the fixture not secured, slowly advance the spindle and begin to push the tubing back out of the collets.

   NOTE: Rotate handle clockwise from the "0" position. *(See Figure-22)*
4. Continue to advance the spindle from the "0" mark until the stationary line lines up with [.00]. *(See Figure-23)*
5. Rotate lever clockwise to secure tubing. At the same time, the spindle can be returned to the home position – "0" mark. The tubing will be held securely provided enough pressure (force) is applied to the lever. *(See Figure-19 on page 10)*
6. Before operating the facing tool, make sure motor settings are correct and plastic safety guard is in place. *(See Figure-20)*



WARNING: A clear plastic safety shield has been attached for your protection. DO NOT REMOVE THE SHIELD. Do not operate tool if shield is damaged or missing. Refer to page 15 for ordering information.

7. Fully depress trigger. *(See Figure-21)*
8. When motor achieves full R/Min, begin to slowly advance the spindle with the spindle feed handle until the tool bit makes contact with the tube.
9. Each graduation on the feed handle represents 0.015 inch (0.38 mm) spindle advance. Continue to rotate handle to advance spindle until desired amount of material is removed.
10. Return handle to home position.
11. Release the trigger to stop the motor and spindle rotation.
12. Release tubing by turning the lever to the 12 o'clock position.
13. Remove tubing and insert a new piece of tubing to begin the process over again.

Figure-20

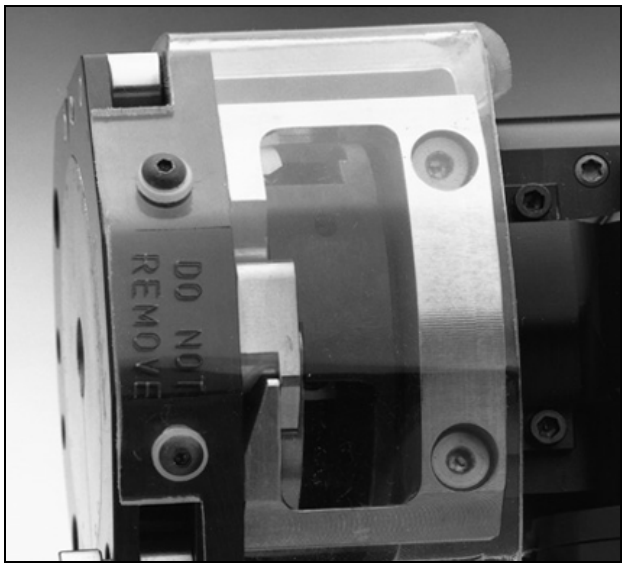


Figure-21



Figure-22



Figure-23



Bench Mount Stand

(See Figures-24 thru 27)

1. Assemble vertical piece to base with the two (2) screws provided and secure tightly.
2. Release latch to open top half.
3. Swing top half open.
4. Place barrel of housing into bracket. Align slot in housing with face of vertical plate.
5. Close top half.
6. Secure with latch.

NOTE: Base plate has holes provided for mounting to a bench top.

Figure-24

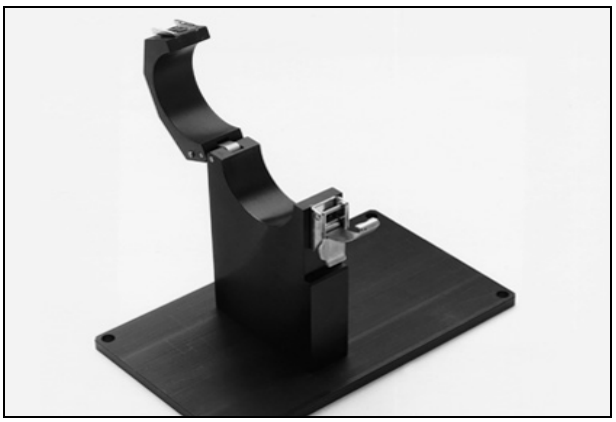


Figure-25

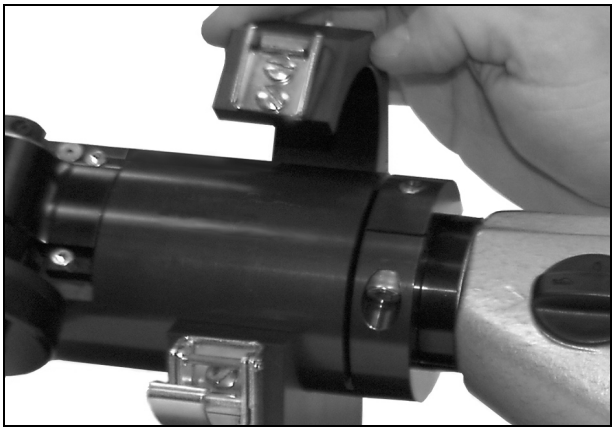


Figure-26

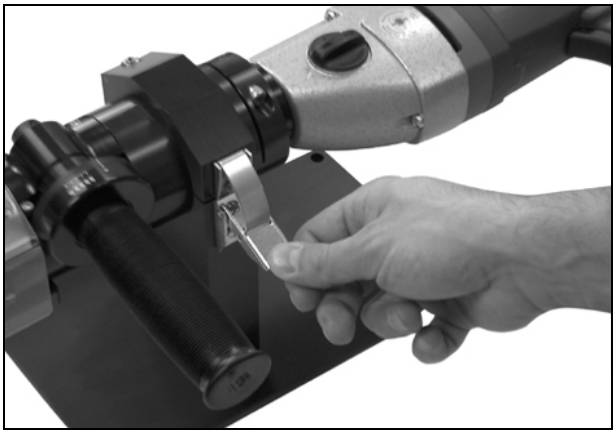
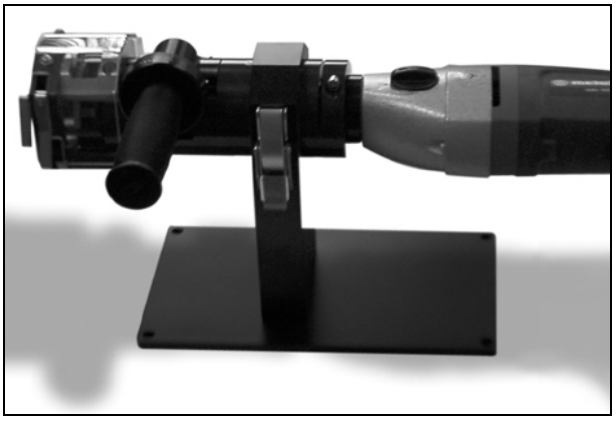


Figure-27



Special Adjustment Features

Fixture Set Screw

There is a set screw located in the top of the hinge of the fixture *(See Figure-28).* This screw should only require use if you experience problems securing the tubing. If the tubing is undersized and rotates in the collet, the set screw can be turned clockwise. If the tubing is oversized and the latch will not secure the tubing, the set screw can be turned counter-clockwise. If you are still unable to secure the tubing properly after making these adjustments, then the tubing is outside of the size range for the collets.

Motor/Housing Set Screw

There is a set screw located in the underside of the facing tool housing *(See Figure-29).* The set screw should only be used if the motor and housing are separated, such as if the motor were to be replaced. An adjustment to this set screw may be needed if there is a change to the orientation of the motor handle and spindle feed handle. This set screw provides a centering adjustment between the motor and the housing.

Figure-28

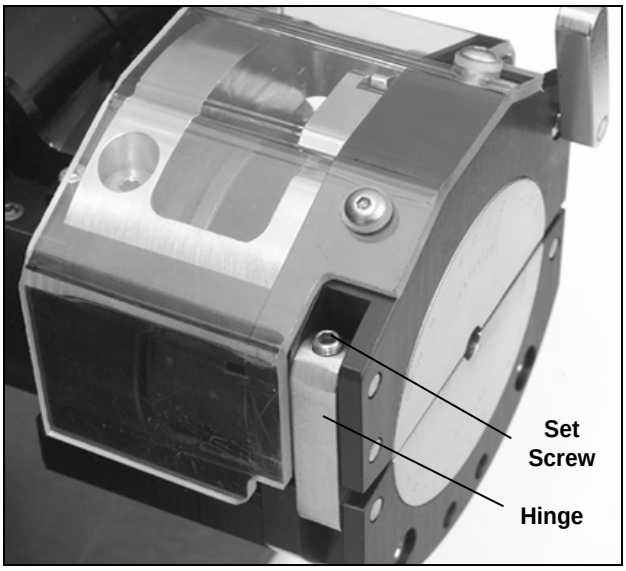
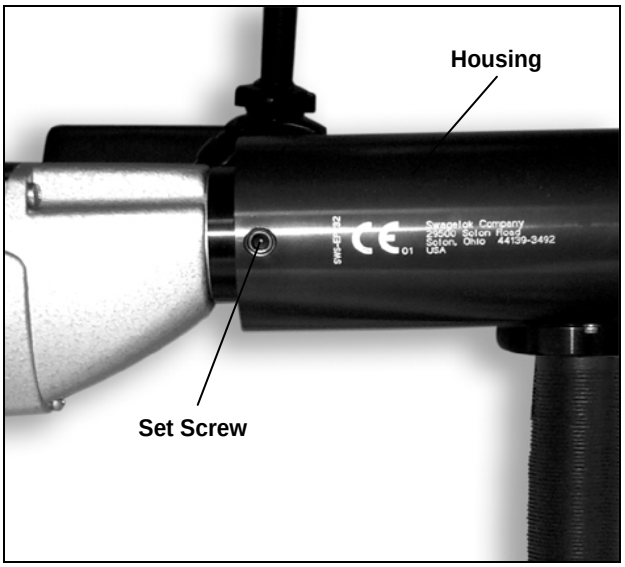
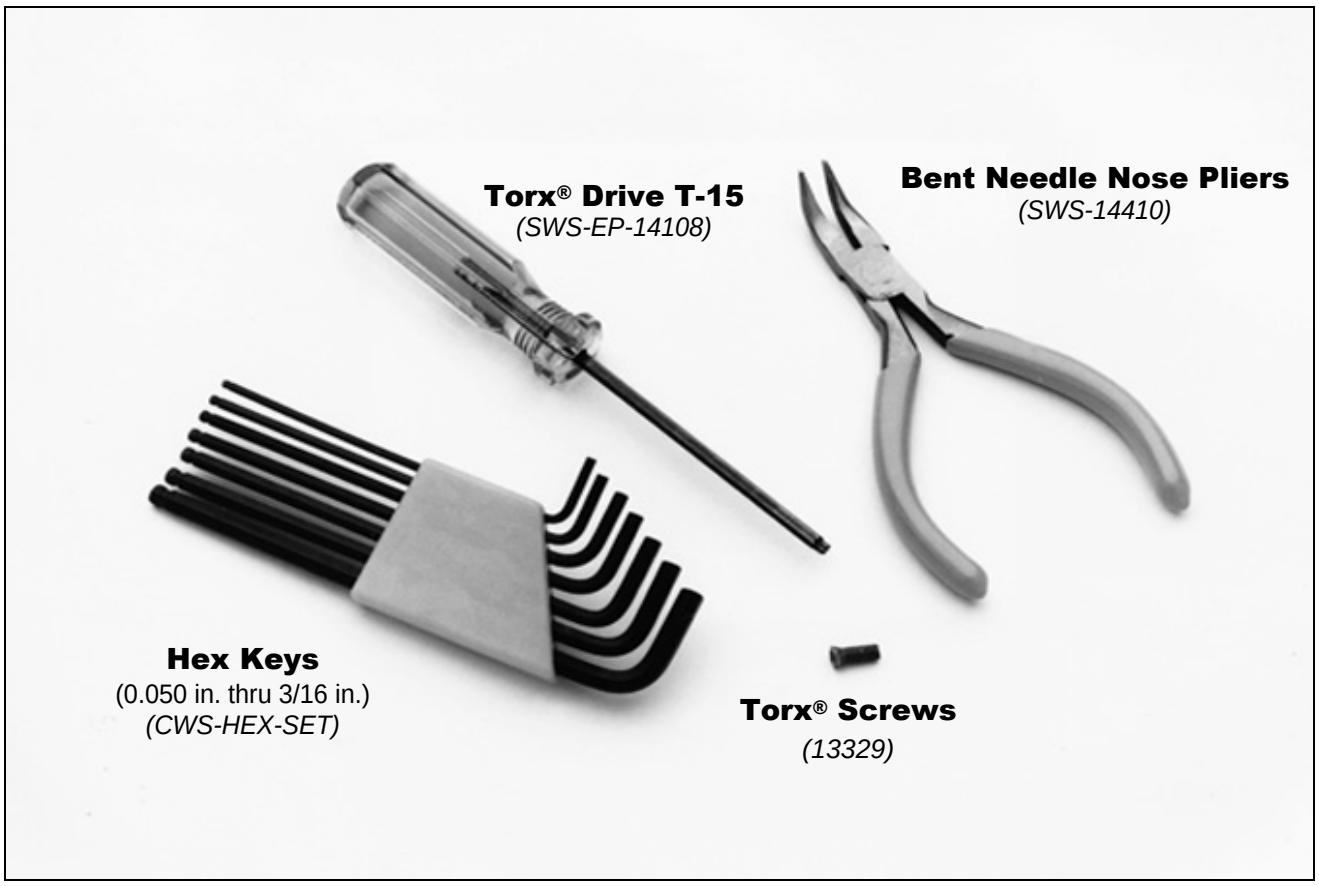


Figure-29



Spare Parts/Accessories and Ordering Numbers



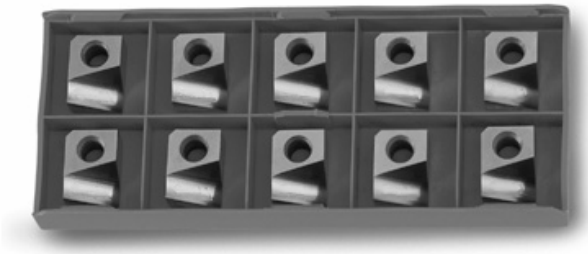
Items shown are included with your Facing Tool.

COLLET TABLE

Nominal Outside Diameter (inches)	Size Designator	Nominal Outside Diameter (mm)	Size Designator
1/8	02	3	03
3/16	03	6	06
1/4	04	8	08
3/8	06	10	10
1/2	08	12	12
5/8	10	14	14
3/4	12	16	16
7/8	14	18	18
1	16	20	20
1-1/8	18	22	22
1-1/4	20	25	25
1-1/2	24	28	28
2	32	35	35
		40	40
		52	52

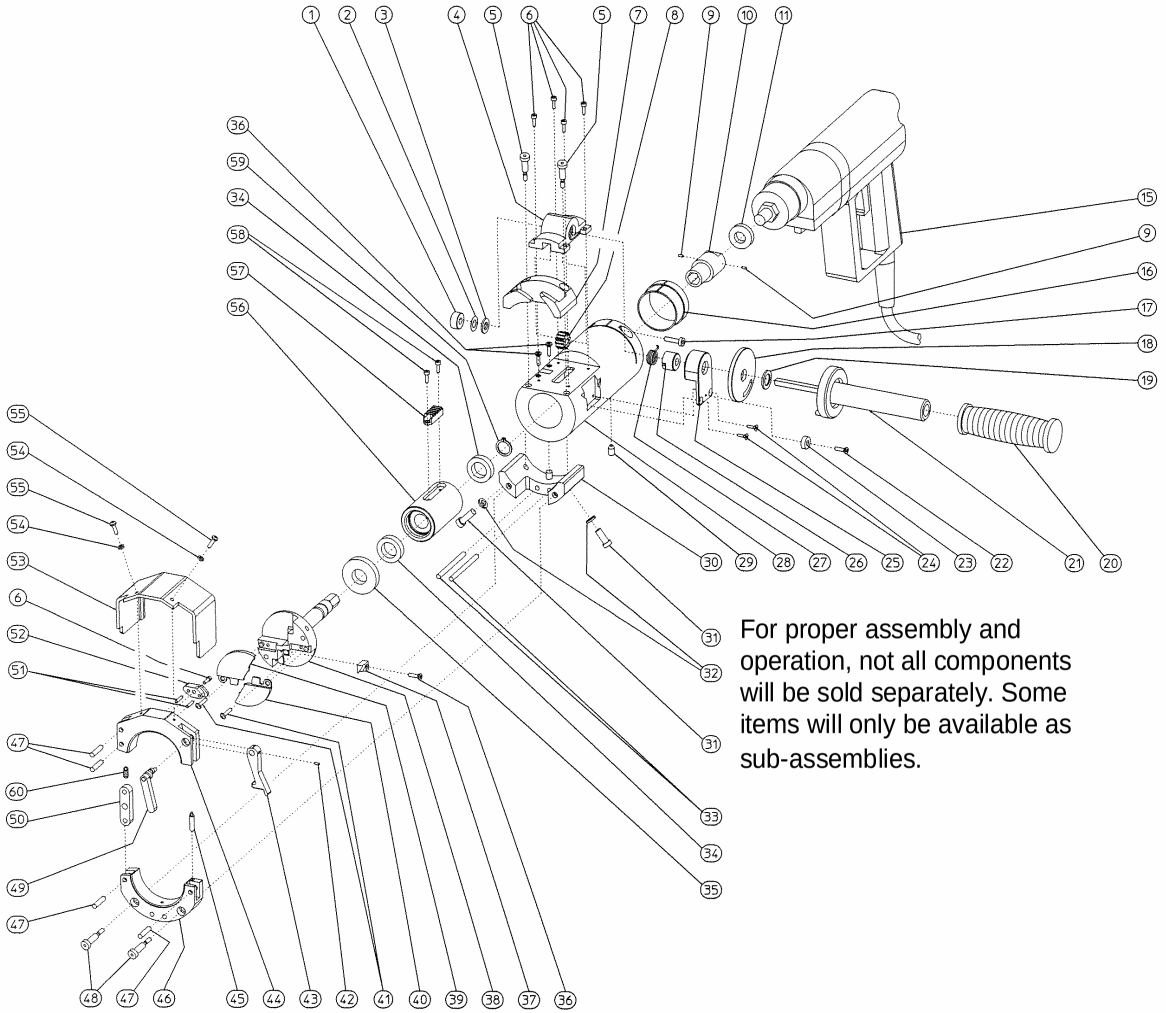
CHART B

Add the designator as a suffix to the Collet Ordering Number.
EXAMPLE: CWS-20UCI-**04**, CWS-20UCI-**12mm**



Cutting Inserts
(SWS-232-BIT-HST)

Replacement Parts Illustration



For proper assembly and operation, not all components will be sold separately. Some items will only be available as sub-assemblies.

PART LIST			
Item No	Part Number	Description	MOQ
1	13342	SHAFT COLLAR, 5/16-24	1
2	13352	SS WAVE WASHER, 5/8 X 5/16 IN.	10
3	13343	WASHER, 0.625 X 0.315 X 1/16 IN.	10
4	15103	GEAR HOUSING	1
5	13323	SS SOCKET HEAD SHOULDER SCREW, 10-32 X 0.250 X 0.500 IN.	1
6	13264	SS SOCKET HEAD CAP SCREW, 6-32 X 0.375 IN.	10
7	15102	UPPER FIXTURE RETAINER	1
8	15119	HANDLE GEAR	1
9	13333	SET SCREW, 8-32 X 0.250 IN. BRASS TIP	10
10	15129	HEX DRIVE	1
11	13196	HEX DRIVE SHIM, 1/2 X 3/4 X 1/8 IN.	10
12	21285	MOTOR, US 110V	1
12	21286	MOTOR, UK 110V	1
12	21287	MOTOR, EURO 220V	1
13	21285	MOTOR, US 110V	1
13	21286	MOTOR, UK 110V	1
13	21287	MOTOR, EURO 220V	1
14	15141	HAMMER LOCKOUT BUTTON	1
14	21285	MOTOR, US 110V	1
14	21286	MOTOR, UK 110V	1
14	21287	MOTOR, EURO 220V	1
15	21285	MOTOR, US 110V	1
15	21286	MOTOR, UK 110V	1
15	21287	MOTOR, EURO 220V	1
16	15142	ADAPTER BUSHING	1
17	13332	SS SOCKET HEAD CAP SCREW, 1/4-28 X 1.000 IN.	10
18	15112	BEZEL	1
19	13346	WASHER, 0.750 X 0.500 X 1/16 IN.	10
20	13339	HANDLE GRIP	1
21	15113	HANDLE	1
22	13112	SS SOCKET HEAD CAP SCREW, 4-40 X 0.250 IN.	10
23	13347	MOUNTING CLEAT	1
24	13330	SS FLAT HEAD CAP SCREW, 6-32 X 0.380 IN.	10
25	15114	HUB COVER	1
26	15115	HUB	1
27	13341	SS SPRING, 0.593 OD X 0.07 IN.	1
28	15100	HOUSING	1
29	13192	SS SOCKET HEAD SET SCREW, 3/8-24 X 0.375 IN.	10
30	21288	LOWER FIXTURE RETAINER	1
31	13328	SS SOCKET HEAD CAP SCREW, 1/4-28 X 0.560 IN.	10
32	13334	LOCKWASHER, 1/4 X 0.078 IN.	10
33	21288	LOWER FIXTURE RETAINER	1
34	21289	SPINDLE	1
35	21289	SPINDLE	1
36	13329	TORX T-15, M4-0.7 X 10MM	1
37	SWS-232-BIT-HST	EP CUTTING INSERTS (PACKAGE OF 10 INSERTS)	1
38	21289	SPINDLE	1
39	15143-A	CHIP DEFLECTOR (1,3)	1
40	15144-A	CHIP DEFLECTOR (2,4)	1
41	13353	BUTTON HEAD TORX T-15, 8-32 X 0.250 IN.	10
42	13303	SS SOCKET HEAD SET SCREW, 6-32 X 0.188 IN.	10
43	15132	LATCH	1
44	21291	FIXTURE	1
45	21291	FIXTURE	1
46	21291	FIXTURE	1
47	21291	FIXTURE	1
48	13194	SS SOCKET HEAD SHOULDER SCREW, 10-32 X 0.250 X 0.625 IN.	1
49	15130	LEVER CAM	1
50	21291	FIXTURE	1
51	21290	FIXTURE CATCH	1
52	21290	FIXTURE CATCH	1
53	15111	CHIP SHIELD	1
54	13335	#6 PLASTIC WASHER, 1/16 IN. THICK	10
55	13150	SS BUTTON HEAD CAP SCREW, 6-32 X 0.375 IN.	10
56	21289	SPINDLE	1
57	15117	GEAR RACK	1
58	13264	SS SOCKET HEAD CAP SCREW, 6-32 X 0.375 IN.	10
59	21289	SPINDLE	1
60	13120	SS SOCKET HEAD SET SCREW, 10-32 X 0.188 IN.	1

BCL - 101

CE

DECLARATION OF CONFORMITY

CE-DECLARATION DE CONFORMITE, EG-ÜBEREINSTIMMUNGSERKLÄRUNG,
DICHIARAZIONE DE CONFOMITÀ-CE, EC-DECLARACIÓN DE CONFORMIDAD

Manufacturer:
Swagelok Company
29500 Solon Road
Solon, Ohio 44139-3492
USA

Authorized Representative
Swagelok AG
St. Gallerstrasse 84
CH-8853 Lachen
Switzerland

Product:
Produit, Produkt, Prodotto, Producto: Tube Facing Tool

Model:
Modèle, Modell, Modello, Modelo: SWS-232-EP

This Product Complies With The Following European Community Directives:

Ce produit conforme aux directives suivantes de la Communauté Européenne,
Dieses Produkt entspricht den nachstehend aufgeführten Richtlinien de Europäischen Union,
Questo prodotto é conforme ai seguenti direttivi della Comunità Europea,
Este producto cumple con las directivas siguientes de la Comunidad Económica Europea:

MACHINERY DIRECTIVE 89/392/EEC
EMC DIRECTIVE 89/336/EEC
LOW VOLTAGE DIRECTIVE 73/23/EEC
AS AMENDED BY THEIR COUNCIL DIRECTIVE

The Following Standards Were Used To Verify Compliance With The Directives:

Les normes suivantes ont été appliquées pour vérifier que ce produit conforme aux directives,
Die folgenden Normen wurden angewendet zur Überprüfung der Übereinstimmung mit den oben genannten Richtlinien,
Sono state usate le seguenti norme per verficare la conformità ai direttivi,
Las normas siguientes han sido utilizadas para verificar que el producto cumple con las directivas correspondientes:

MACHINERY STANDARDS: EN 292-1, EN 292-2, EN 349, EN 953, EN 1050
EMC STANDARDS: EN 55014, EN 61000-3-2, EN 61000-3-3
LOW VOLTAGE STANDARD: EN 50144

Approved By:
Approuvée Par, Genehmigt Durch,
Approvato da, Aprobado por:

Position:
Poste, Position, Posto, Puesto: Vice President and General Manager
Swagelok Fitting Group

Date:
Date, Datum, Data, Fecha: 18 March, 1999

Swagelok®

SWAGELOK TUBE FACING TOOL

Warranty Information Form

IMPORTANT

Please complete and return this form to your Swagelok® Representative for warranty activation.

Date of Delivery: _____

Tube Facing Tool Model Number: _____

Serial Number: _____

Company Name: _____

Distributor Where Purchased: _____

_____

Market Area *(check all that apply)*

- ❑ Semiconductor
- ❑ Oil & Gas
- ❑ Power
- ❑ Other (Please describe) _____
- ❑ Bioprocess / Pharmaceutical
- ❑ Analytical Instrumentation

_____

User Type *(check all that apply)*

- ❑ O.E.M.
- ❑ Fabricator
- ❑ Contractor
- ❑ Other (Please describe) _____
- ❑ Maintenance Department
- ❑ University or Research and Development Lab
- ❑ Operator Training Program

_____

Intended Use *(check all that apply)*

- ❑ Maintenance
- ❑ New Construction
- ❑ Research and Development
- ❑ Other (Please describe) _____
- ❑ Distributor Use (*Rental, Demonstration, Service)*
- ❑ Cleanroom Class:
- ❑ Training

_____

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Warranty Information

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